

CHIPS and Science Act Funding

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/2023 05:00:00 AM EST

PRO POINTS

- **The CHIPS and Science Act authorized significant boosts for federal science and technology** research and development programs. It authorized, but did not appropriate, about \$174 billion through fiscal year 2027 for research, development and workforce improvement in STEM and other fields.
- **About \$80 billion of the authorized funds is earmarked for the National Science Foundation, which** plays a key role in preparing the American workforce for industries like artificial intelligence, quantum information science and biotechnology.
- **NSF received a \$1 billion increase in the fiscal year 2023 spending package. As Republicans look to** start negotiations on their top lines for fiscal 2024, they're eyeing fiscal 2022 numbers as their baseline.

HOW WE GOT HERE

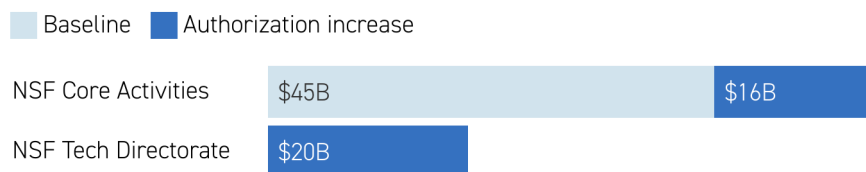
President Joe Biden signed the CHIPS and Science Act in August 2022 on the promise of spending \$280 billion to support the nation's semiconductor industry, jump-start research and development, and build a more diverse and inclusive technical workforce.

The bill drew bipartisan support in its focus on reducing the nation's reliance on foreign-made microchips, specifically from China, by boosting U.S.-based industries and cultivating future engineers and scientists at the nation's universities.

While schools are not listed specifically in the law, they are able to benefit from the authorized investments that would support new initiatives primarily through the National Science Foundation, the Energy Department and other federal agencies. Those agencies are directed to support regional research hubs and distribute grants for training from K-12 to college that align science, technology, engineering and math education with workforce needs.

National Science Foundation receives \$36B boost from CHIPS and Science

Baseline funding and authorization increases for NSF, fiscal years 2022-2027



Source: Senate Commerce Committee
Tara Gnewikow and Rosmery Izaguirre/POLITICO

NSF is slated the largest share of the \$174 billion dedicated to research and workforce development. The CHIPS and Science Act authorized increasing the foundation’s budget by about \$36 billion over the next five years. So far, Congress has boosted funding for the agency by \$1 billion to help with implementation of the new law. Democrats touted this as the “largest dollar increase for NSF of all time and the largest percentage increase for the foundation in more than two decades.”

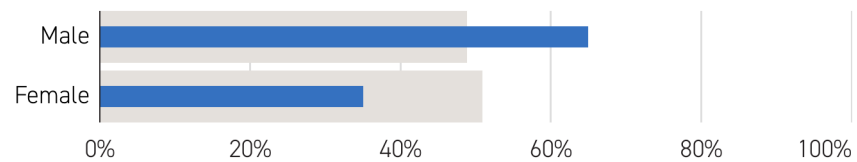
Following Biden’s signature on the CHIPS and Science Act, NSF announced a \$10 million partnership with Intel to build a skilled semiconductor manufacturing workforce, and a \$10 million partnership with Micron to support semiconductor design and manufacturing workforce development. With each of the private companies spending \$5 million, they are working with NSF to develop instructional material, teacher professional development and hands-on opportunities for students at all colleges to advance semiconductor design and manufacturing.

Women, Hispanic and Black Americans underrepresented in STEM workforce

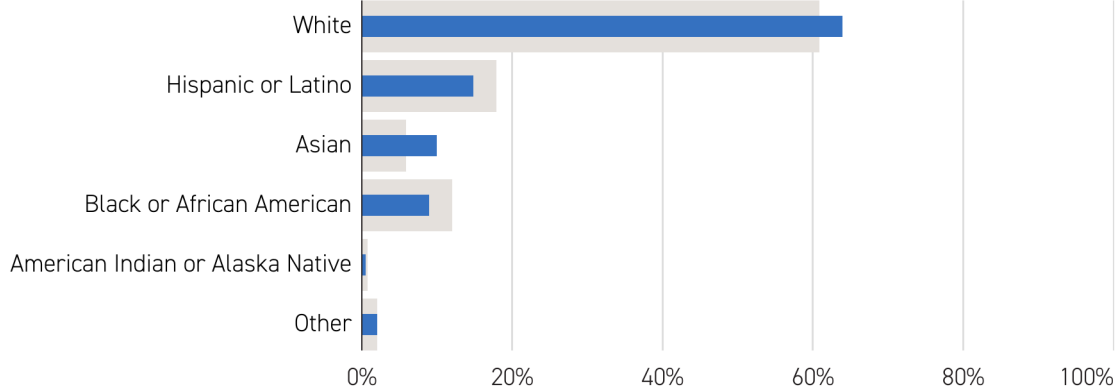
Percentage of U.S. population ages 18-74

■ Portion of total population ■ Portion of STEM workforce

Sex



Race and ethnicity



Note: The STEM workforce includes workers in science and engineering occupations, science and engineering-related occupations and occupations that require a high level of STEM skills and expertise but do not typically require a bachelor's degree for entry. "Other" under race and ethnicity includes Native Hawaiian and other Pacific Islander and more than one race.

Source: National Science Foundation
Rosmary Izaguirre/POLITICO

WHAT'S NEXT

It's unlikely lawmakers will make progress funding the promises made in the law, potentially saddling agencies with a \$174 billion mandate over five years without actually approving the cash.

STEM advocacy groups say that while the law signals that Congress understands the nation is falling behind in research and innovation compared to its global competitors, the lack of funding will create new strains on these agencies.

CHIPS and Science Act authorizes \$170B for STEM, R&D and workforce development

Authorizations for science at federal agencies, fiscal years 2022-2027



Source: Senate Commerce Committee
Tara Gnewikow/POLITICO

President Joe Biden will unveil his budget proposal for the coming fiscal year on March 9. Biden has demanded that Republicans release a proposed fiscal 2024 budget that outlines the spending cuts they want in exchange for a deal to raise the debt ceiling.

House Republicans have committed to adopting a budget plan. But newly installed Senate Budget Chair [Sheldon Whitehouse](#) (D-R.I.) has said he is not sure if Senate Democrats will adopt a budget resolution. The starting point for fiscal year 2024 top lines, according to Rep. [Chip Roy](#) (R-Texas), is going back to [fiscal 2022 top lines](#), which would not include the wins for CHIPS and Science seen in the fiscal 2023 appropriation.

Passing a sweeping government funding package will be difficult in a divided Congress despite the slim majority Republicans have in the House.

POWER PLAYERS

- **National Science Foundation:** The agency, which is slated to receive more than \$80 billion over five years, will be the major agency to support bolstering workforce and STEM education through partnerships with companies and programs for schools and colleges.
- **Semiconductor Industry Association:** The association has frequently brought together education groups and companies to press lawmakers to utilize the five-year \$81 billion authorization of programs in the CHIPS and Science Act at the NSF. Its most prominent members include Intel, Micron and IBM.
- **Sen. Maria Cantwell:** The Washington state Democrat and Senate Commerce chair was key in pressing top appropriators to ensure they include funding for CHIPS and Science in the 2023 federal spending bill.